

Investigation of Bottled Water Quality in Saudi Arabia

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Bottled water is a primary source of drinking water in most regions of Saudi Arabia. Some of the brands have been marketed as ideal for infant formula preparation or nursery drinking water, for use in reconstituting other foods (including those for the debilitated), for cleaning contact lenses, for skin care, and for filling humidifiers.

The quality of the bottled drinking water, including tap water was studied. The study is concentrated on elemental composition and radioactivity content of these water samples. Several commercial brands, locally manufactured and imported, were collected. Twenty-six elements were determined. Elemental analysis was performed with use of a ICP-MS, while radionuclides analysis was performed by alpha spectrometer after proper chemical separation. Elevated concentrations of elements such as Na, Mg, Ca, and Sr as well as some of the natural radionuclides such as Ra-226 appeared in a elevated concentration compared to tap water.